

REMARKS

In a previous office action (Paper No. 5) mailed June 5, 2003, the Examiner requested restriction between the claims of Group I (claims 22-33) drawn to a method for discharging a plurality of ammunition rounds and the claims of Group II (claims 34-53) drawn to a blank ammunition. On July 21, 2003, Applicants elected to prosecute the claims of Group II and to traverse the restriction requirement. The Examiner has now repeated the restriction requirement and made it Final. Accordingly, Applicants cancel claims 22-33 from the present patent application.

Claim 39 was rejected under 35 U.S.C. 112, second paragraph, as indefinite. The Examiner indicated that the phrase "said ammunition lacking a projectile having a mass in excess of a mass of the case" was misleading. Applicants acknowledge that the case is a projectile and that claim 39 was intended to recite that all materials other than the case projected from the industrial tool would have a mass less than the mass of the case. For example, as disclosed in the Table on page 15 of Applicants' specification, if the case mass is a nominal 85 grams, the cover mass is a nominal 6.5 grams and if a wad were present the mass would be on the order of the cover mass. Claim 39 has been amended to more positively recite that any projectile, other than the case itself, has a mass less than the mass of the case.

The Examiner objected to the phrase "of the type" in line 3 of claim 43. The objected to language has been deleted rendering the objection to claim 43 moot.

The Examiner identified claim 47 as vague and indefinite for claiming an industrial tool without further limiting or defining claim 45 from which claim 47 depends. Claim 47 has been amended to recite that the ammunition claimed in claim 45 has dimensions effective for projection from an industrial ballistic tool having rifling as recited in claim 47. As such, claim 47 now limits the projectiles of claim 45 to those effective for discharge from the industrial tool having the rifling recited in claim 47. Claim 47 is now believed to further limit and define claim 45 and to be proper under the provisions of 35 U.S.C. 112, second paragraph.

In view of the amendments to claims 39, 43 and 47, it is believed that all claims now comply with the requirements of 35 U.S.C. 112, second paragraph, and rejections under that section should be removed.

Applicants' invention, as embodied in claim 39, is drawn to ammunition in which a case formed from either cast zinc or a cast zinc-based alloy functions as the projectile. Typically, there are two cases in tandem. A forward case which is the projectile and a rear case that includes a propellant charge, a primer, and a member, such as a cap, to enclose the propellant charge. When the propellant charge is ignited, the forward case is projected from the industrial tool.

Claims 39 and 41 were rejected under 35 U.S.C. 103(a) as unpatentable over Johnson (U.S. 3,621,781) in view of Staiger (U.S. 3,190,536).

U.S. 3,621,781 recites an electrically primed cartridge having a steel cartridge sleeve. An electrical charge ignites the main propellant driving a top cap into a previously fired sleeve which is then projected forward. There is nothing in U.S. 3,621,782 to teach or suggest the use of any material other than steel for a cartridge case.

U.S. 2,190,536 is drawn to cartridge cases formed from non-ferrous metals. The cases are formed by casting a rod of the non-ferrous metal and then sawing a circular disk from the cast rod. This circular disk is then worked into the desired shape of the cartridge case. Accordingly, while the precursor rod is cast, the cartridge case itself is wrought. While drawn to non-ferrous metals, the only disclosed cartridge case is brass, copper 72%-zinc 28%, by weight.

There is nothing in U.S. 2,190,536 to teach or suggest a case formed from a cast zinc or cast zinc-based alloy as opposed to from a wrought zinc or zinc-based alloy. Further, there is nothing in U.S. 2,190,536 to teach or suggest a zinc-based cartridge, rather, with 72% copper, the reference cartridge is copper-based.

There is nothing in the combination of U.S. 3,621,781 with U.S. 2,190,536 to teach or suggest ammunition as claimed by the Applicants in claim 39 where the case is formed from a cast zinc or cast zinc-based alloy. Applicants' claim 39 and the claims dependent therefrom should be allowed over the combination of references.

Applicants acknowledge with thanks the Examiner's indication that claims 34-38 are allowable.

Applicants acknowledge with thanks the Examiner's indication that claims 43-53 would be allowable if rewritten or amended to overcome the rejections under 35 U.S.C. 112, second paragraph. As it is believed that amended claims 43 and 47 now comply with

requirements of 35 U.S.C. 112, second paragraph, it is believed that claims 43-53 are now in condition for allowance.

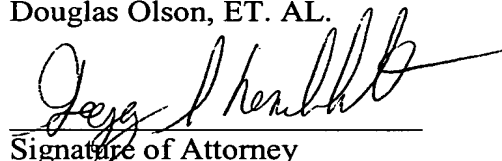
Accordingly, Applicant submits that none of the references, alone or in combination, anticipate or make obvious the invention as presently claimed and that the application is now in condition for allowance. Therefore, Applicant respectfully requests reconsideration and further examination of the application and the Examiner is respectfully requested to take such proper actions so that a patent will issue herefrom as soon as possible.

If the Examiner has any questions or believes that a discussion with Applicant's attorney would expedite prosecution, the Examiner is invited and encouraged to contact the undersigned at the telephone number below.

Please apply any credits or charge any deficiencies to our Deposit Account No. 23-1665.

Date: February 9, 2004
Reg. No. 32,489

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